

### **Remarks**

Upon entry of the above amendments, this application will contain claims 16-30 pending and under consideration. The present application is a national stage application with claims 1-15. In a Preliminary Amendment, claims 1-15 were canceled and new claims 16-30 entered. In the present Response, claims 17 and 19 have been canceled. Claims 16, 21, 26 and 28 have been amended.

In the latest office action dated February 6, 2003, claims 16, 18, and 20-29 were rejected under 46 USC §103(a) over So et al. (US 4,760,138), claims 17, 19, and 30 were rejected over So in view of Bunger et al. (US 5,846,500). Claims 25, 28, and 29 were rejected under 45 USC § 112. In light of the below discussion it is believed that the claimed invention is patentable over the prior art. Reconsideration of this application leading to withdrawal of all rejections and timely allowance of this application is respectfully requested.

### **Rejections under 35 USC §112**

Claims 26, 28 and 29 were rejected under 35 USC §112 as being indefinite. Claim 26 has been amended by replacing the phrase "10 to 80% by weight of the polyhydroxy compound" with the phrase "--100 parts by weight of the aqueous solution of the polyhydroxy compound--". Support for this amendment can be found in the application on page 8 lines 4-11. It is believed that this amendment does not add any new matter and that claim 26 is distinctly claims the subject matter of the Applicant's invention. Withdrawal of this rejection is requested.

Claim 28 and 29 were rejected for depending upon canceled claims 1-12. Claim 28 has been amended to depend from claim 16. Claim 29 depends from claim 28. It is believed that this amendment overcomes the rejections of both claims 28 and 29.

### **Rejections under 35 USC §103**

Claims 16, 18, 20-29 were rejected over So et al. (US 4,760,138). The Applicant respectfully traverses this rejection and further amends claim 16 by incorporating the subject matter recited in claim 17, i.e., that the method obtains a solution of calcium ions from carbide

lime. It is believed that claim 16 as currently amended and claims 18, and 20-29, which depend from claim 16 are patentably distinct from So et al.

Claims 17, 19 and 30 were rejected over So et al. in view of Bunger et al. Claims 17 and 19 have been canceled. As noted above, claim 16 incorporates the subject matter from claim 17. The Applicant respectfully traverse this rejection. It is believed that there would be no motivation to combine the teachings of Bunger et al. with that of So et al.

The present invention is directed to a method of obtaining a solution of calcium ions from a carbide lime waste product, described on page 2 of the application. The claimed method is effected by treating the carbide lime with a solution of a polyhydroxy compound. Carbide lime is an impure calcium containing by product. (Application, page 2, lines 1-14.) The resulting solution of calcium ions may then be processed further to obtain a useful product. The further processing may be by adding a precipitating agent to produce calcium carbonate (see claim 30).

In contrast, So et al discloses and describes producing a "carbonating agent" illustrated by the formula  $[\text{carbohydrate}]_a[\text{M}(\text{HCO}_3)_b \cdot [\text{H}_2\text{O}]_c]$  (So et al, col. 2, lines 14-23.) It is this carbonating agent that is isolated by spray drying, drum drying and vacuum drying. (So et al. col. 3, line 47- col. 4, line 4.) Further, in this formula, "M" can be calcium hydroxide *for the case where the final complex is to be used for food applications*. The calcium is useful as a source an essential mineral needed by the human body. (So et al. col. 3, lines 3-8, emphases added.) So et al does not disclose or make obvious a method for process impure materials such as carbide lime.

Bunger et al. merely discloses that calcium lime can be a calcium source. It would be highly unlikely that the skilled person would consider using such an impure source of calcium as carbide lime with all its impurities in process by So et al. for food applications.

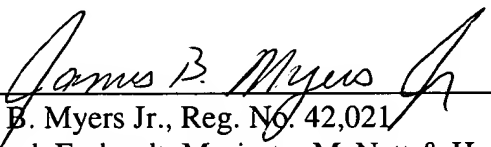
The prior art must be considered in its entirety. It is improper to combine references where the references teach away from their combination. (MPEP 2145, X. D. 2. citing *In re Grasselli*, 218 USPQ 769, 779 (Fed. Cir. 1983.)) Bunger teaches that "hydrated carbide lime is not useful as feed stock for high-value calcium derivatives. This is due to the highly contaminated state of the hydrated calcium lime, usually having dry  $\text{Ca}(\text{CO})_2$  content of about 95% or less." (Bunger et al, col. 3 lines 5-11.) Certainly food applications would be considered

by any one as a high value calcium derivative. Consequently, one skilled in the art would not consider combining the teachings of Bungler with that of So et al.

It is believed that the claimed invention is not made obvious by either So et al., or Bungler et al. considered either singly or in combination. Withdrawal of all rejections of the claims is solicited.

Applicants respectfully request timely examination of this application leading to allowance of all pending claims. The Examiner is invited to contact the undersigned attorney by telephone if there are any questions about this Response or other issues that may be resolved in that fashion.

Respectfully submitted,

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